

REMARKS

In response to the Office Action of October 7, 2009, claim 12 has been amended. Claim 12 was rejected under 35 U.S.C. § 112, second paragraph; claims 1-3, 7, 8, 11-13, 17-20, 33 and 34 were rejected under 35 U.S.C. § 102(b) and claims 4-6, 9-10, 21-24 and 35-38 were rejected under 35 U.S.C. § 103(a). Each of the rejections is addressed below.

Election/Restriction

Applicant affirms the election of Group I (claims 1-13, 17-24 and 33-38).

Rejections under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claim 12 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically the Examiner maintains that the phrase "ambient conditions" is vague and unclear. In response this term has been removed from the claim. It is submitted that if no specific conditions are indicated in a claim, the person skilled in the art will immediately understand that the reference to physical states such as "liquid" relates to standard or ambient conditions. In the present case, the dispersion medium is present as a liquid at standard conditions. This is in line with the disclosure of Example 1 of the present application where the dispersion medium is xylene which is liquid at standard conditions. This dispersion medium liquid can be evaporated by heating under otherwise unchanged, i.e. standard conditions. Since the term "ambient conditions" has been removed from claim 12, it is believed that the Examiner's objection in this respect is rendered moot.

Rejection under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1-3, 7, 8, 11-13, 17-20, 33 and 34 under 35 U.S.C. § 102(b) as being anticipated by Wessling *et al.* (U.S. Pat. No. 5,567,355). Regarding independent claim 1, the Examiner reasons that Wessling *et al.* disclose a composition capable of forming a coating and comprising a mixture of a conductive polymer in colloidal form, carbon black and a

liquid dispersion medium thereby anticipating the rejected claims. As detailed below, Applicant respectfully traverses this rejection.

The Court of Appeals for the Federal Circuit has stated that anticipation requires the presence in a single prior art reference of each and every element of the claimed invention. *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984); *Alco Standard Corp. v. Tennessee Valley Auth.*, 1 USPQ2d 1337, 1341 (Fed. Cir. 1986). "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic v. Genentech Inc.*, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991, citations omitted).

Claim 1 of the instant invention is drawn to a composition capable of forming a coating and comprising a mixture of a conductive polymer in colloidal form, carbon black and a liquid dispersion medium. Wessling *et al.* is directed to intrinsically conductive polymers in the form of dispersible solid particles of a certain size, also called primary particles (see item (e) at lines 11 to 15 of column 2). However, larger aggregates may also form (see item (f) at lines 16 to 34 of column 2). According to Example 12, a polymer blend of polyaniline hydrochloride in polycaprolactone (PCL) is mixed with carbon black and chlorinated polyethylene in melt. This mixture is then extruded or pressed into electrode stripes. Thus, Wessling *et al.* disclose a mixture of polyaniline, carbon black and different non-conductive polymers. Although the so-called primary particles described in Wessling *et al.* have an average diameter of less than 500 nm, there is no disclosure in Example 12 or any of the other examples that the polyaniline particles when dispersed in polycaprolactone are in a colloidal form. Furthermore, Wessling *et al.*, in particular Example 12, do not use a liquid dispersion medium. All the components of Example 12 of the Wessling *et al.* reference are polymers which are solid (at standard conditions). On this basis, Applicant maintains that the subject-matter of claim 1 as presently on file, as well as dependent claims 2, 3, 7, 8, 11-13, 17-20, 33 and 34 are novel over Wessling *et al.*

Applicant would also appreciate it if the Examiner would consider the following evidence of novelty. The instant application is a 35 U.S.C. § 371 national phase application of PCT/EP2005/002889 (WO 2005/090446). Wessling *et al.* (U.S. Pat. No. 5,567,355) is based on

PCT Publication No. WO 89/02155, which is cited in the International Search Report issued on this application. This document initially qualified as an "X" reference, i.e. as being destructive of the novelty of the subject-matter of the application as originally filed. However, after amending the claims, in particular claim 1, during international preliminary examination, said amendment resulting in claim 1 as presently pending, novelty was acknowledged in the International Preliminary Report on Patentability. (See Item V.2 of the IPRP listing Wessling *et al.* as document D3 and item V.4 acknowledging novelty.) Applicant has attached a copy of the International Search Report and International Preliminary Examination Report for the Examiner's ease of reference and consideration.

Applicant therefore respectfully requests that the Examiner reconsider this rejection.

Rejections under 35 U.S.C. § 103(a)

The Examiner bears the burden of establishing a *prima facie* case of obviousness. In determining obviousness, one must focus on Applicant's invention as a whole. *Symbol Technologies Inc. v. Opticon Inc.*, 19 USPQ2d 1241, 1246 (Fed. Cir. 1991). The primary inquiry is:

whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have had a reasonable likelihood of success. . . . Both the suggestion and the expectation of success must be found in the prior art, not in the applicant's disclosure.

In re Dow Chemical, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). To establish obviousness, both the elements of the claimed invention plus the motivation to combine the elements must be present in the prior art. *Ex parte Hiyamizu*, 10 USPQ2d 1393, 1394 (PTO Bd. App. Intf., 1988). Thus, if an element recited in the claims is not described in the cited prior art references, then *prima facie* obviousness is not established.

The Examiner has rejected dependent claims 4-6, 9-10, 21-24 and 35-38 under U.S.C. § 103(a) as being unpatentable over Wessling *et al.* (U.S. Pat. No. 5,567,355) in view of Watanabe *et al.* (U.S. Pat. No. 6,459,564). Briefly, as noted above, the Examiner cites Wessling *et al.* as disclosing a composition capable of forming a coating and comprising a mixture of a conductive

polymer in colloidal form, carbon black and a liquid dispersion medium. The Examiner acknowledges that Wessling *et al.* do not specifically disclose the carbon black having a specific surface area (claims 4-6). To remedy this deficiency the Examiner cites Watanabe *et al.* as teaching a composition comprising polyaniline and activated carbon black having a specific surface of greater than $750 \text{ m}^2/\text{g}$ to produce electrical double layer capacitors with a low leak current and no or little increase resistance and battery height after storage. The Examiner further acknowledges that neither Wessling *et al.* nor Watanabe *et al.* disclose the compositions conductivity (claims 9 and 10). This deficiency is allegedly fulfilled as being an inherent characteristic of a composition resulting from this combination of references. Finally, the Examiner cites the combination of Wessling *et al.* and Watanabe *et al.* as disclosing a capacitor comprising an electrolyte and a pair of electrodes with a separator disposed there between, wherein at least one of the electrodes comprises the composition according to claim 1 or 17 (claims 21-24, 35 and 38). From this the Examiner concludes that it have been obvious to one of ordinary skill in the art at the time the invention was made to employ the carbon black having a specific surface of greater than $750 \text{ m}^2/\text{g}$ as taught by Watanabe *et al.* to produce an electrical article with a low leak current and no or little increase resistance and battery height after storage. Applicant respectfully traverses this rejection.

Claim 1 of the instant invention is drawn to a composition capable of forming a coating and comprising a mixture of a conductive polymer in colloidal form, carbon black and a liquid dispersion medium. As explained in detail above, Applicant maintains that Wessling *et al.* does not teach or suggest a mixture of a conductive polymer in colloidal form, carbon black and a liquid dispersion medium. Watanabe *et al.* which is cited by the Examiner as teaching a composition comprised of carbon black having a specific surface area for use in producing capacitors does not cure this defect. Specifically, it is noted that the activated carbon is used by Watanabe *et al.* only for the manufacture of a positive electrode mixture containing said activated carbon, carbon black and a binder polymer. Watanabe *et al.* do not teach or suggest the further features of independent claim 1, specifically the use of a conductive polymer in colloidal form and a liquid dispersion medium.

With regard to the Examiner's reliance upon column 4, lines 52 to 67 of Watanabe *et al.* as disclosing a composition comprising polyaniline and carbon black, said section of Watanabe *et al.* discusses a number of alternatives. A first alternative is an electrical double layer capacitor formed from activated carbon powder by pressing or rolling together with an adequate binder. A second alternative is to replace the activated carbon by activated carbon fiber material selected from a group of materials (see in particular lines 57 to 61). A third alternative is to use other, so-called carbonaceous materials such as polyaniline and polyacene. Thus, from the context of the entire paragraph it is clear that carbon powder, carbon fibers and polyaniline are mentioned as alternatives. There is no basis for the conclusion that a combination of carbon black and a conductive polymer such as polyaniline is disclosed, let alone said polymer being present in a mixture with carbon black in colloidal form. For this reason, Applicant maintains that the rejection over Wessling *et al.* and Watanabe *et al.* is considered to be unfounded. The combination of the two references simply does not result in the combination of all the elements of independent claim 1.

The above view is in line with the further disclosure of Watanabe *et al.* at page 6, lines 4 to 8 where a combination of activated carbon, carbon black and fluorocarbon plastics is discussed. However, there is no mention of a conductive polymer, let alone a conductive polymer in colloidal form.

For the reasons discussed above, Applicant does not believe that the cited references, either alone or in combination, render the compositions of the present invention obvious. Reconsideration is respectfully requested.

Appl. No. 10/598,458
Amdt. dated February 8, 2010
Reply to Office Action of October 7, 2009

This constitutes a request for any needed extension of time and an authorization to charge all fees therefore to deposit account No. 19-5117, if not otherwise specifically requested. The undersigned hereby authorizes the charge of any fees created by the filing of this document or any deficiency of fees submitted herewith to be charged to deposit account No. 19-5117.

Respectfully submitted,

Date February 8, 2010

/Rosemary Kellogg/
Rosemary Kellogg, #39,726
Swanson & Bratschun, L.L.C.
8210 SouthPark Terrace
Littleton, Colorado 80120
Telephone: (303) 268-0066
Facsimile: (303) 268-0065

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